

# **MODULE DEVELOPMENT WITH SHIELD METAL ARC WELDING (SMAW)**

## **IN SMK N 2 WONOSARI**

**by**

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### **ABSTRACT**

The purpose of this research is to develop a new product in the form of welding module with the Shielded Metal Arc Welding (SMAW) at SMK N 2 Wonosari. Another purpose of this study is to determine the stages of development and feasibility of welding module with the Shielded Metal Arc Welding (SMAW) at SMK N 2 Wonosari accordance with the Education Unit Level Curriculum (KTSP) at SMK N 2 Wonosari.

The research method used is the of research and development method. New product development in the form of module subjects welding engineering competence through several stages, namely (1) needs analysis, consisting of (a) field observations, (b) analysis of the needs of the media, (2) evaluation, (3) design, consisting of (a) preparing the initial draft, (4) evaluation, (5) The third stage of research and implementation that consists of: (a) validation of the device, (b) analysis and revision, (c) individual trials; (d) evaluation, (e) test group; (f) evaluation, (g) field test, (6) analysis and evaluation, (7) modules. The research was conducted in class X Student Engineering Department Wonosari Las SMK N 2. Data was collected using a questionnaire instrument. Analytical techniques used are the qualitative and quantitative analysis to determine the feasibility of welding module with the Shielded Metal Arc Welding (SMAW) at SMK N 2 Wonosari.

Test the feasibility of welding module with Shielded Metal Arc Welding (SMAW) is developed, according to expert faculty assessment criteria to obtain the material is very feasible, assessment of Master Engineering Program as an expert welding material is very feasible to obtain the assessment criteria, assessment of the media get expert assessment criteria very feasible. From the individual test criteria is well worth getting. From a small pilot group is well worth getting the assessment criteria. from field trials to obtain the assessment criteria is feasible. Based on these data it can be concluded that the welding module with the Shielded Metal Arc Welding (SMAW) is already well developed so it's worth it to support the learning process of welding with the Shielded Metal Arc Welding (SMAW) at SMK N 2 Wonosari.

**Key words:** development, module, welding with the Shielded Metal Arc Welding (SMAW).